while in some others it is coiled spirally "in the stomach;" the *Tunicata*, we are told, have no tongue. Some of the technical terms are used in such a sense as to require a special glossary; thus (at p. 13) some opercula are said to be "annular and multispiral," while in other places (*e. g.* p. 345) *concentric* opercula are called "annular." In plain English "annular" means like a ring, *i. e.* with a hole in the middle, and "no operculum presents an annular form *." At p. 14 we are informed, "the *epidermis*, like that of other animals, is inorganic, and cast off occasionally by the animal," and the shell itself is called "epithelium." At p. 18 the *Octopoda* are defined as having "foot none;" but to make up for it, at p. 16, they have "ears developed." This last announcement would have amazed us more, but for the recollection of the phrase "auricular crests" employed by D'Orbigny for the little processes on the sides of the head in some Calamaries, and which have as much to do with *hearing* as the "ears" of the sea-hare. Under the genus *Achatinella* it is stated that "the females are ovo-viviparous" (p. 136), and again under *Partula*, "the females produce their young alive" (p. 145); we will not ask what the males are.

The references to fossil shells are few, and would have been better omitted, as the authors appear to have had no experience in such matters. They are certainly wrong in referring *Marginella pellucida* to the extinct genus *Volvaria* (p. 194); and are evidently misinformed about *Discohelix* and *Serpularia*, or they would not have described recent shells under those names.

Not much is made of the geographical distribution of the genera; at first the notices are very few and loose, but are more frequent afterwards, as the subgenera of land shells were chiefly founded on geographical considerations. We do not know what was intended by "north coast of America" given as a locality of *Oleacina*; but at p. 92, for "low latitudes" we should read "high." *Tornatellina* is said to be found in Madeira, but the only Madeiran species is removed to another family.

Most writers, especially when their publications extend over several years, become more cautious as they proceed, and we hope soon to congratulate the authors on the completion of their work in a style improved by experience; we shall do so more heartily if they will use the opportunity afforded by their preface and appendix to acknowledge and correct such things as may yet be rectified.

Das Gebiss der Schnecken, zur Begründung einer natürlichen Classification, untersucht von Dr. F. H. Troschel, Professor an der Universität zu Bonn. Erste Lieferung, mit vier Kupfertafeln von Hugo Troschel. Berlin, 1856, 4to.

Dr. Troschel says that he has devoted twenty years to the study of the teeth of Mollusca, and laboured to collect every material that could throw light on the subject. He considers that there are now two classes of students, conchologists and malacozoologists; the latter take the only imperishable, unchangeable organ of the molluscous animal

* Owen, Hunterian Lectures on the Invertebrata, p. 543.

as their study; and for their justification the author alludes to the importance attached to the teeth in the classification of the entire animal kingdom, considering the anatomy of the mouth in Mollusca quite as important as in any other class of animals. Whether there are also peculiarities in the mouth-apparatus of Bivalves and other mollusks which do not possess any fixed portions and which suck in their nourishment from the tidal currents, the author leaves for future consideration, but considers that by further inquiries much might be learnt on the subject. He is also of opinion that this study of the teeth of Mollusca is of the greatest importance to the malacozoologist, for, while it is almost impossible, even in spirits, to preserve the soft, perishable bodies of the snails, it is doubly welcome to him to possess a fixed, decided, and easily preserved organ, which is so exactly calculated to establish the relations of the genera.

Very much has been written on the subject, but the results of these researches are so scattered and so little known, that the author has decided in the present work to collect all that has been published, and, with the addition of his own observations, so to arrange and illustrate the rich store of materials that every future student may with ease compare his own observations with those of others, and thus distinguish new discoveries from those already established. For this present work he copies all such drawings as relate to the subject, carefully noting the author and the book from which he takes them.

It is probable, in consequence of the interest which the subject has of late created, that during the publication of the work, much may appear of which the author may not be able to take notice. In order as much as possible to avoid this difficulty, he earnestly begs all who are studying the teeth of Mollusca to inform him without delay of the results of their labours, which he will publish (always provided the drawings be true to nature) with the fullest acknowledgement of the authorship.

Finally he proposes, at the close of the work, to write a supplement, in which he will make mention of such new discoveries as may have appeared during its publication, or that he may have overlooked in former works, and will feel grateful to any one who will point out any such omissions.

The part now published is devoted to the teeth of the Heteropoda, the Pteropoda, and part of the Pulmonata Operculata of the Gasteropoda, and is illustrated with four very clearly engraved plates, each containing many subjects, which, besides showing copies of the various figures which have been hitherto published of the teeth of these animals. contain a number of drawings of teeth now figured for the first time. We must consider this as a very important work, and shall watch its progress with interest.

As one fact of interest, we may observe that some of the *Cyclostomidæ* figured show a great affinity to the teeth of *Proserpina*, described and figured in a preceding Number of this Journal, and in this manner an analogy to the numerous hair-like teeth of the *Trochidæ*; but in these land shells, instead of there being a very large

number of hair-like teeth, there is a single very large lateral tooth divided into numerous more or less slender hair-like pectinate lobes, somewhat similar to the teeth of the *Ovulidæ*.

Prodromus Systematis Naturalis Regni Vegetabilis; Auctore Alphonso de Candolle. Vol. 14. pars prior. Parisiis, 1856, pp. 492.

It is pleasing to have to announce the publication of another volume of this invaluable work, and to be able to state that it fully supports the character borne by its predecessors. These later volumes, which treat of Monochlamydeous plants, are also the more acceptable from their containing descriptions of Natural Orders, which, from their position in the usual sequence of the orders, have not been elaborated in many extensive systematic works. Some authors have commenced with the Ranunculaceæ, others have started from the Algæ or Gramineæ, and have not been enabled to extend their respective works so far as to arrive at them.

This volume contains the Polygonaceæ by Bentham and Meisner, Myristicaceæ by A. de Candolle, Proteaceæ by Meisner, Penæaceæ and Geissolomaceæ by A. de Candolle. The last of these, if really a distinct order, is singular as including only one known species of plant. The names of the authors are a sufficient surety that the plants have been carefully studied and skilfully described and arranged. We have had occasion to examine some parts of the book with care, and must be allowed to express our admiration of them. We may especially refer to the suborder Polygoneæ, including, with others, the genera *Rumex* and *Polygonum*. Both of these present exceeding difficulty from the large number of closely allied species included in them. They are genera to which Professor Meisner has long paid much attention, and he seems to have drawn the line skilfully between the excessive tendency to combination of some writers, and the extreme desire to found new species, of others.

It is expected that other volumes will soon follow that which is now before us; and we may be allowed to express a hope, that the early volumes of the 'Prodromus' will soon be considered with a view of their being re-written, in conformity with the more perfect state in which their successors have issued from the press.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

February 26, 1856.—Dr. Gray, F.R.S., in the Chair.

On some additional Species of Birds received in collections from Bogota.

By Philip Lutley Sclater, M.A., F.Z.S.

MM. Verreaux of Paris, knowing the interest I take in New Grenadian ornithology, have most kindly transmitted to me some